Question#18419

The weight of a rock on the moon is 0.85 N. If acceleration due to gravity on the moon is 1.7 m/s2, what will be its weight on the earth

Answer:

The weight is defined as: $P = mg$, were g – acceleration due to gravity, m – mass.

Such as on the moon g=1.7 m/s^2 and weight is 0.85 N:

$$m = \frac{P}{g} = \frac{0.85}{1.7} = 0.5\ kg$$

On the earth weight will be:

$$P = mg = 0.5 * 9.8 = 4.9\ N$$

Answer: 4.9 N.